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ABSTRACT

These workshop proceedings include a discussion of nine questions regarding essentials and guidelines of an accredited respiratory care essentials educational program: (1) How does the program assess the appropriateness of facilities? (2) How can the success of the clinical components be determined? (3) How can the validity and reliability of the major summative evaluation systems be identified and assessed? (4) What are acceptable methods of integration of clinical and didactic instruction, and clinical coordination and supervision? (5) What types of affective domain goals, standards, and curricular material are appropriate--how can these be evaluated? (6) How can a program get higher rates of return from surveys of its communities of interest and how can a program legally obtain an individual's score reports? (7) How can the raw score reports be related to instructional success and program modification? (8) What methods to determine curricular offerings should be used in programs with multiple exit levels, with respect to student's interests and employment opportunities? and (9) How and when should a program modify its goals and standards when its graduates are not meeting the originally expressed competencies? An appendix contains (1) forms and evaluations used by respiratory care programs from across the country; (2) Essentials and Guidelines of an Accredited Education Program for the Respiratory Therapy Technician and Respiratory Therapist; and (3) a copy of the National Board for Respiratory Care's newsletter. (NLA)

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Proceedings of the Workshop to Review Questions Asked About the Respiratory Care Essentials

AARC Summer Forum
July 14-15, 1989

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INTRODUCTION

These proceedings are the results of meetings held July 14-15, 1989 at the Don Cesar Resort in St. Petersburg Beach, Florida during the Summer Forum of the American Association for Respiratory Care. The purpose of this meeting was to meet and discuss the most frequently asked questions regarding the implementation of the Essentials and Guidelines of an Accredited Educational Program for the Respiratory Therapy Technician and Respiratory Therapist, revised in 1986 by the Joint Review Committee for Respiratory Therapy Education (reproduced in the appendix of these proceedings). The primary reason for the plethora of questions about the revised Essentials is the shift in emphasis from process orientation to product orientation.

The goals of this session were: collaboration with colleagues, sharing ideas and materials on a focused area of the Essentials, and publication of these proceedings. Program participants (N=98) met in small groups to discuss the issues of their choice. The following day, a respondent panel of JRCRTE members reacted to each group's report. The responses summarized in these proceedings are informed opinions of JRCRTE members, all of whom have considerable expertise in the development and implementation of outcome oriented essentials.

The issue discussed by each group is printed in bold type and the Essential(s) that apply to the issue follow. Applicable materials submitted by program participants are in the appendix. Because of a shortage of time at the meeting, questions six, seven, and eight were not reviewed by the respondent panel. However, the group discussion of those questions is presented.

This material may be used by respiratory care programs to assist in the accreditation process. It may also be used by other health professions agencies as a reference in matters pertaining to accreditation. No part of these proceedings represent official statements of any participant or institution. They are the thoughts and processes that were helpful in their efforts to gain accreditation.

Tim Op't Holt, Ed.D., R.R.T.
Editor

Group 1

How does the program assess the appropriateness of laboratory and library facilities?

From Essential III.B.1.2.

> The laboratory should also be of such size and design to permit all students assigned at any given time period to observe and perform all laboratory exercises prescribed in the program's instructional plan. The laboratory should be equipped with appropriate numbers and variety of equipment so that students can observe and perform all required laboratory exercises. The laboratory should be made accessible to students at times other than regularly scheduled exercises.
>
> Library Resources
>
> Collections of current books, periodicals, and pertinent reference materials shall be readily accessible to students and shall be sufficient in scope to support the curriculum.
>
> Since the quality and availability of library resources affects program outcomes, they should be accessible to students outside of regular classroom hours, such as evenings and on weekends. Instructional plans should promote student utilization of these resources.

Group 1 broke this question into two categories. The first was, "Does the laboratory equipment meet the needs of the community of interest?" Group members suggested that Respiratory Care programs may want to survey current students, graduates, clinical department directors, advisory committee members, and physicians to determine what types of equipment are needed in an RC educational program. Directors should reference program curricular objectives, the JRCRTE equipment list (1977 Blue Book, JRCRTE), laboratory exercise equipment lists, and laboratory handbooks. Assessment and evaluation of equipment can be done by having the students keep a log of their laboratory equipment use and the duration of their practice. Such a log may be of value when evaluating the need for rental or purchase of equipment.

The second question was, "What library materials should be available, and how are these materials deemed appropriate?" The group noted that a reference list furnished by the National Board for Respiratory Care is a good starting point, although the current list is dated and some of the books are out of print. Course requirements list both those books that are required for purchase as well as those that are recommended readings. Methods of assessing the appropriateness of library holdings were suggested, including student survey regarding the availability and usefulness of holdings, various types of records of book utilization, the quality of article reviews and reference papers, faculty survey, and the availability of computer search facilities.

As a preface to the respondent panel, a representative of the NBRC noted that the reference list was currently being reviewed and revised with

significant input from the programs. Each suggested reference will be keyed to one or more of the NBRC's examinations.

The respondent panel agreed that the methods proposed by group one to evaluate laboratory and library resources were appropriate. However, they cautioned those in attendance that in any case, a purpose statement must first be developed to show direction. The panel also suggested directed practical examinations and direct observation of students' skills in the laboratory. This provides assessment of laboratory adequacy as well as student preparedness for clinical practice. The respondents suggested the use of computer assisted instruction software packages because many of these packages track individual student's use. Representative survey instruments are in the appendix.

Group 2

What methods can be utilized to determine the success of each aspect of the clinical component of the program (physician input, clinical instruction, adequacy of clinical sites)?

Essential III.C.

Clinical Resources

The clinical resources shall provide each student with learning opportunities sufficient in quantity, quality, and scope commensurate with national standards, to ensure achievement of the competencies stated in the curriculum.

The clinical facilities of the program should provide services commensurate with the types and level of practice throughout the nation and in sufficient volume and variety for the number of respiratory care students receiving clinical education in that facility. The sponsor should periodically evaluate each clinical facility with respect to its continued appropriateness and efficacy in meeting the expectations of the program. Clinical affiliates should conform to the standards for respiratory care established by the Joint Commission on the Accreditation of Healthcare Organizations.

Essential IV.E.

Clinical Experience

All clinical experiences shall be educational in nature. The sponsor shall assure that each clinical assignment of the students is based upon the instructional plan of the program.

All clinical activity assigned to students should be sequential, integrated with didactic and laboratory instruction, and consistent with the overall instructional plan of the program.

Essential V.C.4.

Physician Input

Physician input shall be provided both in the administration of the program and instruction of the students to ensure achievement of the program's stated goals and standards.

> The purpose of the physician input is two-fold. The administrative input should assure the appropriate scope and accuracy of the medical content of the program. The purpose of the instructional input into all phases of the program is both to convey information and perspective, and also to develop effective communication skills between physicians and students.

The group evaluating this question first focused on medical input. The group agreed that a goal for medical input should be established, and that the primary factor be adequate communication between the physician and student. Other factors in medical input include the student's ability to communicate with other members of healthcare team--a broader definition of medical input. The group also listed as physician roles: classroom teaching, political involvement, and active program support.

Methods of evaluating physician input include:

1. evaluation of student's examination results when content was physician taught.
2. student evaluation of the physician's ability to cover the lecture objectives.
3. graduate survey of the impact of physician input in their practice.
4. determination of the student's ability to take and use a verbal order.
5. clinical instructors' observations of communication between students and physicians in bedside interactions.
6. individual student evaluation by the medical director based on achievement of medical input-related objectives.
7. evaluating the effectiveness of the medical director's ability to obtain medical input for the program from other specialty areas and other clinical affiliate's medical personnel.
8. comparing student and physician evaluations of the same experience (rounds, case conferences, lectures).

The second part of this question focused on the adequacy of clinical instruction by the various types of clinical faculty. The necessity for a goal stating that student competency is the primary concern was reemphasized. The importance of involving the community of interest in formulating the goal and standards for this area was stressed.

Clinical instruction may be evaluated by the following methods:

1. student evaluation of instructor
2. instructor self-evaluaton
3. program faculty evaluation of instructor (when clinical instructors are not the same as the didactic faculty)
4. observation of students' clinical skills (achievement of checklists, affective skills)
5. evaluation of success with clinically related aspects of credentialing examinations
6. employer survey of graduates' competencies
7. observation of the clinical instructor's competence as a therapist

Most programs use a combination of instruments to evaluate the clinical instructor. Participants stressed the importance of relating evaluation results to program goals, standards, and objectives so that indicated changes are made. These may include: instructor inservice, modification of course objectives, and/or changes in the checklists and number/types of competencies. Another important point is the need to use a variety, rather than a single method of evaluation to help verify and validate results (triangulation).

The third aspect discussed by the group was evaluation of the adequacy of the clinical site. One way is to simply survey students and graduates, asking if the clinical site provided the opportunities and the time to achieve the stated clinical competencies. Also, students should be asked if the clinical site provided parking, security, emergency medical treatment, library facilities, and access to medical records and chest roentgenograms. Obviously, the program personnel should assure these services prior to establishing a particular clinical site. Student surveys verify presence of these services.

Program faculty should solicit student and instructor perceptions of the site's strengths and weaknesses and these opinions should be solicited on a regular basis. Evaluation results should be used to determine the continued use of that particular site. For example, if the site was originally intended for development of intensive care skills, and through student survey and faculty observation only a few ventilators were in use for a semester, that facility should no longer be considered for that purpose. However, the same facility may be more appropriate for instruction in routine floor care. An evaluation of treatment modality statistics may aid in this determination. Other factors that aid in effective clinical experiences are cooperation from department directors and the use of qualified alumni as clinical instructors due to their knowledge of faculty expectations.

This group also commented on the timing of surveys. They noted that immediate survey of students provides results based on their attitudes as students in the program. A survey of alumni 1-2 years after graduation relates their attitudes as members of the respiratory care community. It also allows them to tell the program of its strengths and weaknesses as related to skills and knowledge they found necessary to be a practitioner in their locale.

The respondent panel reemphasized the need for goals and standards as guidelines for the implementation of medical input, clinical site use, and clinical instructor use. To evaluate the adequacy of clinical sites and instructors, they stressed outcomes such as student examination scores and achievement of behavioral objectives. They reminded the audience to gear the students' activities to the type of clinical sites available. Because so many programs rely upon hospital staff for clinical instruction, it is imperative for the program faculty to identify who is working with the students, and to regularly update and evaluate these individuals. Regular contact with clinical instructors will help assure consistency of clinical experiences. This is also important so that students are evaluated in the same way for equivalent experiences by different instructors (interrater reliability).

A participant asked, "What if the objectives are achieved, but the evaluations of the clinical sites are poor?" One respondent replied that the focus of evaluation then must shift to what types of data to collect in order to make changes in the clinical situation (site or personnel). Then, what is the plan for remediation? Evaluation materials are found in the appendix.

Group 3

How can the validity and reliability of the major summative evaluation systems be identified and assessed?

Essential V.D.2.

Methods

The methods used to evaluate students shall verify the achievement of the objectives stated in the curriculum. Evaluation methods, including direct assessment of clinical competencies in patient care environments, shall be appropriate in design to assure valid assessment of competency.

Faculty should demonstrate that the evaluation methods chosen are consistent with the competencies and objectives being tested. Methods of assessment should be carefully designed and constructed to measure stated objectives at the appropriate level of difficulty. Methods used to evaluate clinical skills and behaviors should be consistent with stated performance expectations and designed to assess competency attainment.

In order to ensure effectiveness, student evaluation methods should undergo frequent appraisal. Faculty should demonstrate that such appraisals result in the updating and revision of the methods employed, or in the formulation of more effective methods.

The group discussed the various forms of evaluation which are available. They opened with the statement, "If an instrument is valid, it follows that it is also reliable. If an instrument is not valid, it could still be reliable. But if it is not valid, the reliability doesn't matter." The first examinations mentioned were the NBRC self-assessment examinations, which are valid and reliable, according to NBRC studies. The results of these examinations, correlated with the results of the credentialing examination can show that the program's curriculum, methodologies and evaluations are appropriate.

Another method to assist in content validity is to review applicable examinations with the medical director. This also shows that the medical director is involved with the didactic portion of the program (Essn. V.C.4.) Didactic examinations may also be administered to clinical faculty. This may verify that the knowledge gained in the classroom is prerequisite to clinical practice. It also demonstrates efforts to integrate didactic and clinical education (Essn. V.C.3.).

Clinical evaluation materials should be periodically reviewed with the advisory committee (clinicians, physicians, and graduates), to assure that their content is consistent with accepted practice. Field testing and direct observation of students will further substantiate the usefulness, validity, and reliability of these instruments, provided that the outcome is that which is desired. Interrater reliability may be improved by group meetings of instructors who observe and rate live or taped student performance. Discussion then follows to improve interrater scores.

Correlation of graduate, employer, and instructor surveys regarding the appropriateness of various evaluation tools aids validity.

The respondent panel agreed that the NBRC self-assessment examinations are valid and reliable. However, the use of only one or two evaluation devices should be avoided, because they probably yield insufficient data. One respondent cautioned the participants to avoid lengthy statistical processes, especially since classes tend to be small and most statistical processes require numbers larger than are available. Use of such processes with a small N generally violate the assumptions of such tests. These tests may be reserved for larger groups such as evaluation of alumni in 10 year increments. It was suggested that observation is a most effective tool, as were minutes of the advisory committee where pass rates were discussed. In such discussions, problems, and mechanisms to solve these problems may be discussed. Another mechanism to improve test construction is to utilize your institution's internal resources (education consulting). Institutional computer exam scoring and videotaping facilities may also be available.

Group 4

What are acceptable methods of integration of clinical and didactic instruction, clinical coordination, and clinical supervision?

Essential V.C.3

Integration

The program shall ensure that instruction in the clinical setting is properly integrated and coordinated with the other components of the curriculum, and that each student receives adequate technical instruction and experience consistent with the goals and standards of the program.

The program should assure that the clinical experience and instruction of students is meaningful and parallel in content and concept with the material presented in didactic and laboratory sessions. Schedules should be developed which provide for equivalent clinical experience for all students. The instructional and supervisory activities of all clinical instructors should be appropriate, effective, and coordinated.

The group discussed the typical sequence of lecture to laboratory to clinical, noting that there are wide variations in emphasis in each area due to differences in resources. There was strong support for a greater emphasis on laboratory preparation for the following reasons:

1. If the student can become proficient in the laboratory, the student will perform better in clinical, and clinical time will be more effective.
2. Thorough laboratory preparation will net a greater control over the product going into clinical.
3. If clinical supervision is minimal, a well-prepared student will be proficient regardless.

Ways to improve the laboratory include:

1. reducing clinical time, if necessary, to allow increased laboratory time.
2. bringing in the clinical instructors, if possible, to teach skills in the laboratory.
3. bringing in ambulatory patients.
4. having students evaluate each other.
5. videotaping student practice and allowing critique.
6. writing creative laboratory assignments.

Regarding clinical coordination, the group identified communication as the key ingredient. They recommended that the DCE keep a log of these communications, hold frequent meetings with clinical instructors, and provide a group seminar for all clinical instructors concerning educational strategies, before the start of clinical.

Regarding clinical supervision, the group recommended that the clinical instructor be used as a guide to refine those skills learned in the laboratory. Oral evaluations are valuable to improve communications skills and critical thinking. They also recommended case conferences as an integrative tool.

The group determined that clinical supervision and clinical instructor pay varied widely. Variations included:

1. all instructors paid by college.
2. program director and director of clinical education paid by college; limited reliance on hospital staff.
3. clinical instructors paid by hospital; no other patient care duties while instructing.
4 unpaid clinical instructors who carry patient care load while teaching.

As a result, paid clinical instructors, or those who carry no additional patient load while teaching, may be more responsive to the needs of the students and faculty. In the case of unpaid instructors who must also carry a patient care load, college faculty can do a lot to show appreciation by providing inservice education, examination review, and privileges at the campus (library, intramural activity).

The respondent panel agreed with these suggestions and comments, with the note that the methodology must be consistent with the program's goals and standards.

The issue of increased laboratory time was addressed, but the panelists thought that it should not be at the expense of clinical time. They noted that because we have a changing student body (more adult learners), lecturing may become less successful. Therefore, innovative ways to cut lecture and increase experiential learning may be more valuable. More laboratory time may also be necessary in programs located in states where licensure laws prohibit practice before formal educaton. Oral examinations are acceptable, but paper and pencil examinations are the reality and students must be thoroughly prepared for them. While preclinical checklists are useful, the solution to interclinic differences may be to develop and alter clinical instructor behavior, as mentioned by the group, i.e., communication with the DCE, seminars.

Clinical coordination should allow for changes in students' lifestyles and for adult learners. These factors affect a student's ability to remain in the program, or to attend on a full-time basis. Therefore, students may take varied amounts of time to complete the curriculum, but if the outcomes are the same as for full-time students, the goal is met.

Group 5

What types of affective domain goals and standards are appropriate; what types(s) of curricular material is appropriate; how can these be evaluated?

From Essential II.B.

Minimum Expectations

The goals and standards must include, but need not be limited to, providing assurance that graduates demonstrate at least entry-level competencies, as periodically defined by nationally accepted standards of practitioner roles and functions.

Each program should incorporate within its goals and standards the expectation that the graduates will consistently demonstrate competence at or above that required at entry-level into the field. These statements should include specific competencies representing the knowledge, skill, and behavior expected of program graduates. These competencies should provide the framework for structuring the program's instructional plan and for defining the objectives of its curriculum.

Competencies should be derived from and encompass nationally accepted standards of practitioner roles and functions, as periodically developed by the appropriate professional organizations. Program personnel are responsible for continually monitoring such standards and ensuring that the knowledge, skill, and behavior expected of the graduates are consistent with them.

Essential V.D

Student Evaluation

1. Frequency and Purpose
   Evaluation of students shall be conducted on a recurrent basis and with sufficient frequency to provide both the students and program faculty with valid and timely indications of the students' progress toward and achievement of the competencies and objectives stated in the curriculum.

The evaluation system should provide the student and faculty with clear and timely indications of each student's knowledge, performance-based strengths and weaknesses, and progress toward attainment of the competencies and objectives stated in the curriculum. The evaluation system should also verify student achievement of these competencies and objectives.

Students should have ample time to correct identified deficiencies in knowledge and/or performance.

Group five developed a framework for the affective domain in a program. Their framework included a goal, standards, suggested curricular material, and evaluation mechanisms.

Their stated goal was, "The graduate will demonstrate the ability to develop therapeutic relationships." This relationship was defined as one in which one benefits from the interaction. The components of this relationship which will be developed in the students are:

1. the communication process, consisting of sensitive listening, congruency between verbal and nonverbal communications, indication of respect for the patient and the patient's family, and appropriate communication with nurses, physicians, and other hospital staff.
2. empathy.
3. development of strategic equilibrium while dealing with chronic and terminally ill patients, and during crisis situations whether internal or external to the individual.
4. development of a commitment to "give back" via non-paid work for nonprofit organizations (e.g., Heart Association, Red Cross, Lung Association), involvement in professional organizations, and scholarly activity.

Curriculum materials are available such as texts on empathy development and helping skills. How to Teach About Values by Jack Fraenkel (Prentice-Hall, 1977) is an example. Many other texts in health professions education have materials regarding the inculcation and evaluation of affective domain traits. Besides texts, audiovisual material, group process facilitation materials, and human relationship laboratory exercises are available.

Evaluation of affective traits has long been discussed as difficult, but not impossible. Tools are available for evaluation of empathy, listening, critical thinking, and behavior. Graduate behavior may be assessed via employer surveys. Participation in nonprofit organizations and participation in professional organizations may be observed or noted through documentation. Patient and family surveys may be effective in evaluating the students' relationships with clients.

The respondent panel noted that an affective domain goal was strongly encouraged, but not necessarily a "must". From their extensive review of programs' goals and standards, few programs specify any in the affective domain. They did note that at least one standard should be in the affective domain. David Matuszak of Baltimore, group five member, noted that the nursing literature is replete with references to the affective domain. He also has a bibliography available, and he said that the Middle States accreditation agency has a number of resources on affective assessment.

Group 6

How can a program get higher rates of return from surveys of its communities of interest (graduates, employers)? How can a program legally obtain individual's score reports?

This group had a number of approaches to obtaining data from graduates and employers. Regarding surveys, the group recommended the following:

1. clearly state why the survey data is needed.
2. use follow-up mailings.
3. in the cover letter, cite examples of program changes that have occurred as a result of previous survey results.
4. include 25 cents for a cup of coffee while the survey is completed.
5. use postage paid, pre-addressed business reply envelopes.
6. do a pilot study on the survey instrument.
7. use colored paper for the survey instrument.

Other methods suggested by the group were:

1. have a student reunion where the admission ticket is the completed graduate survey.
2. conduct a raffle where respondents' names will be eligible for free books, paid seminars, bookstore discounts, etc.
3. expose students to a regular battery of end-of-semester evaluations that are meainingful and can evoke change.
4. alumni newsletters.

Among the observations made by group members about the conduct and results of surveys were:

1. that the maintenance of the data file seems to be the responsibility of the program director.
2. essentially, the same instrument is being used for graduates and employers.
3. random sampling of graduates and employers is not occurring (probably due to small N).
4. it is difficult to survey nontraditional employers (undefined).
5. surveys designed to be anonymous will often be returned with the respondent identified.
6. exit, and one- and three-year surveys appear to be most popular.
7. there are samples of surveys available such as Scanlon's long form.

The group noted that the only source of student score reports is the graduates themselves. To obtain these results, the program must ask the graduates to send a copy of their examination results to the program. The group's concern was that only students with extremely high or low scores will respond to this request. Important data from near-average scores may never be retrieved.

Tips for tracking graduates are:

1. use the NBRC directory to tell you where graduates are if a request is returned. A difficulty occurs when there is a name change.
2. the NBRC will verify an individual's credentials for a fee.
3. the graduate's parents may be a good source of follow-up.
4. last day of school address cards providing two addresses may be valuable.
5. ask for up-to-date addresses in an alumni newsletter.
6. check for updated addresses in the registrar's office via transcript request forms.

Group 7

How can the raw score reports from the NBRC be related to instructional success and the need for program modification.

Group seven submitted a response that is reported verbatim.

1. First, set a standard of performance expected of students attempting the NBRC exams.
2. Next, upon receipt of the NBRC scores, categorize the report results according to the year in which individuals obtained their certificate of completion. It may be advantageous for some programs to further differentiate between: a) when an individual completed his/her Respiratory Therapy coursework; and b) when that individual actually obtained the certificate of completion. In some cases, this date may not be the same.
3. Once the results are categorized by years of completion, review all the group data raw scores for the year of interest and compare the results to the standard for your program.
   For example, your program standard might be 75%. Review of the NBRC raw scores may indicate that for category IIA your students only achieve 65%. That does not meet your standard.
4. Using this example, the next step then is to review the curriculum to identify where content for category IIA is being taught.
   Our recommendation for simplifying this curriculum review process is to:
   a. distribute the NBRC matrix to all curriculum faculty
   b. have faculty members rate their perceived level of responsibility for instructing the content identified on the matrix with a 1, 2, or 3, with each number representing the following:

      1 indicates primary responsibility for material -
      in other words, the faculty member has to teach this material, as the student might not receive it anywhere else in the program

      2 indicates that the faculty member must reinforce it -
      faculty member not primarily responsible for the content but just reinforced the material

      3 indicates no responsibility -
      in this case the faculty member has nothing to do with the material - they simply do not teach it.

The results of such a review will (hopefully) ensure that all material on the matrix receives a 1. In addition, the evaluation may identify areas of duplication within the curriculum so that modifications in precious time devoted to instruction can be made.

Now, let's go back to our example of the NBRC raw scores, in which category IIA was substandard. Having evaluated your curriculum in terms of the matrix, the course or courses in which content for category IIA is taught are easily identifiable and appropriate changes or modifications in instruction can be implemented.

We did identify however, several contaminating factors for the data including:

- The fact that some students may complete all their Respiratory Therapy coursework several years prior to receiving their certificate of clinical completion; this delay may affect the student's NBRC results.

- Secondly, during any interlude between completion of Respiratory Therapy coursework and NBRC exams, the quality of the employment setting or lack thereof may affect score results.

- Thirdly, an entire class may have different strengths and weaknesses than other classes. Therefore, the NBRC raw score results of content may be best evaluated by an observation of trends between classes.

- A fourth factor addresses the impact of licensure - some states have adopted lower cut scores for the granting of a state license than what the NBRC has identified for obtaining national credentials . . students may not re-attempt exams, once state licensure is granted.

Any of these contaminating factors, and perhaps others, may be present in our programs and it is important to take note of them, evaluate their significance, and be aware of changes that may be needed.

Further we wish to stress that there is more to looking at the NBRC data than for satisfaction of JRCRTE Essentials. Review of the data can be used to enhance faculty communication, and foster feelings of inclusion in the curriculum decision-making process by the very act of sharing the data with your faculty and seeking their input regarding the identifiable strengths and weaknesses of the curriculum.

The NBRC job analysis and examination matrix are a foundation only. We are obligated to teach at least all of the matrix, however, our obligations go further. For example we have a commitment to our communities of interest - to appropriately meet their needs so that what we teach must almost always exceed the NBRC matrix.

Group 8

What methods to determine curricular offerings could or should be used in programs with multiple exit levels or multicompetency tracks, with respect to students' interests and employment opportunities?

In order to determine curricular offerings, the group suggested review of the NBRC examination matrices, employer needs, CRTT and RRT job descriptions, and institutional curricular requirements. Multicompetency was defined by the group as those competencies required for the CRTT or RRT plus those services defined as nontraditional by the AARC's Task Force on Professional Direction. The need for multicompetent practitioners may be determined by surveying employers and graduates.

The group identified multiple entry points, including:

1. traditional high school graduates.
2. advanced standing students who would be evaluated based upon their previous formal education and/or respiratory care experience.
3. adult learners who may require an accelerated program to enter the job market quickly.
4. degreed individuals who complete respiratory care requirements for a certificate of completion.
5. part-time students who may benefit from evening or weekend classes.

Primary student interests were listed as traditional entry into professional education, on-the-job training conversion into credential eligibility, CRTT to RRT completion, and RRT to bachelor's degree conversion.

Group 9

How and when should a program modify its goals and standards to conform to entry-level or the advanced practitioner level when its graduates are falling short of or exceeding the competencies expressed in the matrix originally intended?

Essential II. Outcome Orientation

Program Goals and Standards

There shall be a written statement of program goals and program standards consistent with and responsive to the demonstrated needs and expectations of the various communities it serves.

A statement of goals and standards should provide the basis for program planning, implementation, and evaluation. They should be rationally derived and compatible with both the mission of the sponsoring institution(s) and the expectations of the professional community of interest. Goals and standards should be based upon the substantiated need of the health care providers and employers, and upon the characteristics of the students and the community served.

A program should regularly assess its goals and standards for appropriateness and demonstrate an ability to identify and respond to changes in the needs and/or expectations of its communities of interest. An advisory committee, or similarly constituted group representing these communities of interest, should be designated and charged with assisting program and sponsoring institutional personnel in formulating appropriate goals and standards, monitoring needs and expectations, and ensuring program responsiveness to change.

The group reaffirmed the importance of setting goals and standards that are consistent with the communities of interest which the program serves. They felt that there would be no reason to change a basic goal such as providing the health care community with graduates who can demonstrate the skills specified.

Goals should be changed when they are no longer compatible with the mission of the sponsoring institution and expectations of the professional communities of interest served by the program.

The group suggested that the program director approach the organizations which have designated interests in the program, such as the advisory committee, sponsoring institution, employers, and faculty, and solicit input for needs they perceive.

Following this, the program would resubmit a new goal more tailored to meet the needs of the communities of interest.

The respondent panel agreed with this review, stating that goals should be changed to conform to the level of the graduate, or change the program to conform to the desired goal. Obviously, every attempt should be made to improve the program's input and process to provide the level of graduate desired by the community of interest.

Should the sponsoring institution's goals conflict with those of the community of interest, the program personnel must strive for a "best fit" between the interest of all communities involved.

Appendix

A collection of forms and evaluations used
by respiratory care programs from across the country

The JRCRTE Essentials

NBRC Newsletter: Tracking Respiratory Care Graduates

LOUISIANA STATE UNIVERSITY MEDICAL CENTER
SCHOOL OF ALLIED HEALTH PROFESSIONS
DEPARTMENT OF CARDIOPULMONARY SCIENCE

I. Students Background

A. Didactic

Students must achieve 75% of all points possible in the classroom. Topics covered in theory are listed below:

1. Gas Physics
2. Oxygen Therapy
3. Humidity & Aerosol Therapy
4. IPPB/IS/CPT
5. CPR
6. Airway management

B. Laboratory

Students have had the opportunity in a lab setting to practice therapy. Each student was observed on two separate occasions performing the following on another student:

1. Applying all oxygen delivery devices
2. Setting up humidifiers and nebulizers
3. Administering aerosol treatment via hand-held nebulizer
4. Administering IPPB via Bird Mark 7 and Bennet PR2
5. Administering Incentive Spirometry
6. Administering Chest Physical Therapy
7. Manikin practice for CPR and have been issued an AHA-BLS card

C. Future Preparation

During the firs 8 weeks of the fall semester, students are enrolled in Respiratory Therapy Fundamentals which covers the above topics. In the last eight weeks, students take Advanced Techniques I. This course covers airway care, manual resuscitators, and an introduction to ventilators. Therefore, after the first four weeks of clinical students will be able to:

1. Suction (NT or via tracheostomy)
2. Manually ventilate after suctioning
3. Change tracheostomy collars

Students are not prepared to perform patient care in the intensive care units.

II. Student's Attendance Policies

A. Students will attend clinics every scheduled day

B. Clinics generally begin at 6:30 or 6:45 a.m. and end at 3:00 p.m. Some variation may exist. Check with the clinical coordinator for specific times.

C. Students who are not at clinic during the schedule day and time will be assessed an absence period.

D. All absences will be made up on a 1 to 1 ration. All make0up time must be completed prior to the last week of the clinical rotation in order to complete the course.

E. Make up time is not scheduled to interfere with scheduled classes or clinic days. The scheduling of make up time is done by the clinical coordinator and staff of the particular affiliate.

F. Absence periods may be excused or unexcused at the discretion of the clinical coordinator.

G. Excused absences generally include illness with documentation or family crisis. Make-up time will be required.

H. Unexcused absence periods are assessed for: (1) three (3) late arrivals, (2) failure to notify clinical coordinator of late arrival or absence **PRIOR** to the shift report and (3) leaving clinic before designated time. Make up time will be required.

I. The student will lose one grade level for each two unexcused absence. Five unexcused absences will result in a failing grade.

III. Dress Code

1. Conservative street clothes should be worn with lab coat. Males will wear neckties.

2. White lab coat with LSU-SAHP patch on front and CPSC patch on left shoulder.

3. School I.D. badge will also be worn.

4. No tennis shoes or open toed shoes.

5. Hair and beards must be clean and neatly trimmed.

6. Additional required supplies include stethescope and a watch with a second hand. Bandage scissors are recommended.

7. The student must maintain a clean, neat, professional appearance at all times. The instructor may send a student home who is not properly attired. This will result in an unexcused absence.

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IV. Students Responsibilities

A. Students should become familiar with the department's policy and procedure manual including emergency disaster plans.

B. Students should not count on a morning break for breakfast. Lunch is to be scheduled around scheduled treatments and patient meal times.

C. Students are responsible for the proper completion of all assigned procedures. Any conflicts in orders for therapy should be discussed with the shift supervisor or clinical faculty prior to starting treatments.

D. Students should not be idle. Time between treatment should be utilized to work on case reports or study for classes and evaluation.

E. Students should be ethical and professional at all times. Students are subject to dismissal for shoddy work, unsafe conduct or any unprofessional behavior.

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V. Clinical Instructors Responsibilities

A. Provide students an example on how therapy is to be provided according to hospital protocol.

B. Assign students a daily workload that provides treatments to improve skills but allow for adequate chart reading.

C. Evaluate students performance, provide suggestions for improvement, and point out deficiencies. This will be initiated by the instructor in the first four weeks.

D. Evaluate students performance upon their request for completion of their clinical packets.

E. Be available to aid students when difficulties or questions arise in giving care.

F. Make available to students any educational experience in addition to floor care responsibilities (special procedures, in-services, lectures, etc.)

G. Assist students in preparation of case studies.

H. Document absences and tardiness.

I. Notify the clinical coordinator of any specific student problems.

VI. Suggested Teaching Plan

Week I: INTRODUCTION TO PATIENT CARE

Goal: Although students have practiced in lab, the real world is different. During this week, students have to learn about the gas outlets, how the lights and beds work, and how to talk to patients in addition to providing effective therapy. Therefore, close supervision is required.

Day 1

Patient Selection: 2 patients per student
2 different therapies
(for example: IPPB and aerosol)

Chart review: instruct students on importance of good chart review. Point out common abbreviations. Discuss all important sections of the chart including:

diagnosis
history
prescribed therapy
age & weight for IS/IPPB
medications
lab test exp HIV/PPD
Chest X-ray

Patient Care: Instructor or TA should give the first round treatment. The student should listen to breath sounds with instructor and carefully observe all aspects of therapy. Students should give second round therapy and instructor or TA observing. Suggestions to improve treatment can be made discreetly at this time.

Extra Activities: Between treatments time should be used for:

(1) reviewing CXR's on assigned patients
(2) bronchoscopies
(3) pulmonary functions
(4) arterial blood gases
(5) studying.

Day 2 & 3:

Patient selection: Should be the same as day 1.

Chart review: should be done by student with instructor.

Patient care: student provides all care with instructor in constant supervision.

WEEK 2 GOAL: Beginning Independence

Patient Selection: Same as week 1

Chart review: Students responsibility

Patient care: Student should be allowed to start therapy without supervision. Instructor should sit in after patient assessment is done. Instructor maybe present for any treatment being done for the first time.

Extras: As above

WEEK 3 GOAL: Expanding Independence

Patient Selection: Increase to 3 treatments per round i.e. (IPPB & Aerosol/CPT)

Chart review: Students responsibility

Patient care: Students should be allowed to give therapy with minimal supervision. For example let student start therapy alone, check in, leave & remain on that floor.

Extras: As above
Oxygen rounds procedures can be taught at this time.

WEEK 4: Maximum Independence

Patient Selection: 3 treatments per round (may increase to 4 if one is IS) add oxygen rounds

Chart review: Students responsibility

Patient care: Student should be allowed to give therapy without direct supervision. Student should still be able to contact the instructor for problems. Instructor may check in during treatments. Effectiveness of therapy can be obtained from discussing with student and double checking the chart.

Extras: As above
student may start requesting evaluation on procedures they feel comfortable with.

Friday, Nov. 11th: Four week evaluation are due. Instructor will complete student evaluation form and review with students in private. Especially important are comments which will lead to improved performance over remainder of the rotation. Students will also be give evaluation forms to be completed on instructor and affiliates.

WEEKS 5 - 8:

Patient selection: may increase to 4 or 5 treatments per round depending on number of IS. Oxygen rounds should also be assigned. Consider what treatments students need to complete packet requirements.

Patient care: should be continued with maximum independence.

Check list evaluations: should be ongoing at students request. All checklist should be completed by Wednesday, December 7th.

Friday, December 9th: Final Evaluation forms are due. If packets are complete. Evaluation only need to be done. Students are to report to school at 1200 to turn in all packets and take final exam.

VII. Evaluation Forms & Clinical Checklist

The following section discusses the use of each form used to evaluate and maintain activity records.

A. **The "Packet"**

This packet includes an overview of clinical guidelines, a description of the evaluation process, the clinical checkoff record and clinical check list record.

1. The clinical checkoff record is to be marked whenever a student asks to be evaluated.

2. A check ( ) should be placed for a passing evaluation and a X for an unsatisfactory evaluation. Please initial the box.

3. By keeping tract of all evaluations, if a student doesn't complete all required procedures by the end of a rotation, the number of opportunities for completion is indicated.

4. The clinical checklist record should be signed and dated **only** when a procedure is successfully completed.

VIII CASE STUDY FORM

A. Student are responsible for completing this form.

B. The instructor's responsibility is to assist in the selection of a patient.

C. The chart should not be rewritten. Somethings can be condensed as suggested below.

1. Respiratory Care: patient was on ventilator (SIMV) for 12 hrs post CABG. Following patient was started on ISg 2 hours with daily assessment. **DO NOT** include all vent settings and changes.

2. Blood Gases: only significant gases. For example:
   9/1/88 7.31, 50, 26, -2.0, 95% start 1 lpm NC
   9/1/88 7.36, 48, 26, 0.5, 97%

3. Chest X-ray: only significant films or major changes.

CASE STUDY FORM FOR CLINICAL APPLICATIONS I

Admitting physical and diagnosis:

Previous Medical History:

Treatment for admitting diagnosis

Respiratory Care (ventilator, bronchial hygiene, oxygen therapy) include rational for

Blood Gas Interpretation (start with the first done since admission) should include management based on ABG's

Chest X-ray Interpretation (start with the first since admission) should include patient management based on chest x-ray

Laboratory values (indicate any outside of normal)

Medications (list all meds start with respiratory, then cardiac, and any others. Explain what each medication does)

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STUDENT CLINICAL EVALUATION FORM

NAME:_____PERIOD:_____

CLINIC:_____EVALUATOR:_____

DATE:_____

1. Quality of work: Performing in a competent manner

   Unsatisfactory 1 2 3 4 5 Excellent

2. Initiative: Using time productive

   Irresponsible 1 2 3 4 5 Very Dependable

3. Organization skills: Completes assigned work in reasonable amount of time

   Unreasonable 1 2 3 4 5 Reasonable

4. Problem solving: Ability to identify and solve problems

   Does not demonstrate ability 1 2 3 4 5 Exceptional ability

5. Application: Integrates theory with clinical application

   Poor 1 2 3 4 5 Exceptional

6. Chart reading:

   Poor 1 2 3 4 5 Exceptional

7. Attitude: Compliance with policies

   Poor compliance 1 2 3 4 5 Readily complies

8. Personal relationship: Quality of relationship with hospital personnel and instructors

   Unacceptable 1 2 3 4 5 Works well with others

9. Patient relationship: Communication skills

   Unacceptable 1 2 3 4 5 Excellent rapport

10. Attendance:

    _____ Number of hours missed (or days missed)

    _____ Required makeup time

    _____ Amount of time made up

11. Overall ratting for this rotation:

    Unsatisfactory 1 2 3 4 5 Excellent

    Comments:

Evaluator's signature: _____

Student's signature: _____

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COURSE NUMBER_____ PERIOD _____

Please complete this form in the area that you wish to comment on. Please give the evaluation sufficient time and consideration because this information is of vital importance in the planning of future clinicals.

ROTATION AREA: PLEASE CIRCLE ONE

Floor care:	East Jeff Mercy Hotel Dieu CHNO	Pulmonary Functions:	Hotel Dieu V.A. East Jeff. Childrens' Tulane
Critical Care:	East Jeff. Tulane CHNO V.A.	Neonatal:	Childrens Lakeside CHNO

EVALUATION: You may use a rating system (1-5: with 1 indicating negative situation and 5 indicating something positive), give written comment on both.

1. How well organized was the instructor?

   Not well 1 2 3 4 5 Very well

2. To what extent was the instructor prepared for class?

   Not prepared 1 2 3 4 5 Well prepared

3. Did the instructor provide practical application for material that was presented?

   No applications 1 2 3 4 5 Many applications

4. To what extent did the instructor set clear and definite standards of work and achievement?

   Unclear 1 2 3 4 5 Very clear

5. How knowledgeable was the instructor of the content of the course?

   Lacked knowledge 1 2 3 4 5 Very knowledgeable

6. To what extend did the instructor explain clearly?

   Unclear 1 2 3 4 5 Very clear

7. Did the instructor encourage problem solving and independent thinking?

   Not at all 1 2 3 4 5 Very much

8. Did the instructor show a genuine interest in students?

   No interest 1 2 3 4 5 Genuine interest

9. To what extent was the instructor sensitive to students feelings and problems?

   Insensitive 1 2 3 4 5 Very sensitive

10. Please rate the instructor's ability to answer student's questions.

    Terrible 1 2 3 4 5 Excellent

11. Were you well received by the clinic's staff? If no explain.

12. Were your expectations meet by the clinic(s).

13. Would you prefer more or less time in a particular clinic?

14. Do you feel this clinical period inhanced your education as a respiratory student?

15. What changes in this rotation period would you like to see and why?

16. Use this space to comment on any area(s) that were not covered by this evaluation. (Use the back or additional paper if you need more space.)

EVALUATION OF STUDENT PARTICIPATION ON PHYSICIAN ROUNDS OR CONFERENCE

BALL STATE UNIVERSITY

RESPIRATORY THERAPY PROGRAM

CHECK APPROPRIATE ACTIVITY

DATE: _____

ROUNDS ☐ CONFERENCE ☐

CLINICAL SITE: _____

	Level of Participation					Knowledge Demonstrated					
STUDENT	1	2	3	4	5	1	2	3	4	5	COMMENTS:
1.											
2.											
3.											
4.											
5.											
6.											
7.											
8.											
9.											
10.											
11.											
12.											
13.											
14.											

Evaluation Key:
5. Superior
4. Above Average
3. Average
2. Below Average
1. Poor

Physician Signature: _____

STUDENT: DATE:

BALL STATE UNIVERSITY RESPIRATORY THERAPY PROGRAM

PROFICIENCY EVALUATION

PROCEDURE: Incentive Spirometry

EQUIPMENT UTILIZED:

☐ CLINICAL
- ☐ NEW PATIENT
- ☐ REPEAT PROCEDURE

☐ LABORATORY
- ☐ PEER APPLICATION
- ☐ MANIKIN, MODEL

		SATISFATORY	UNSATISFACTORY	NOT OBSERVED	NOT APPLICABLE
STEPS IN PROCEDURE:					
PREPARATION					
1.	Selects and assembles necessary supplies.				
2.	Verifies and evaluates physicians order.				
3.	Washes hands.				
4.	Identifies patient, self and department.				
5.	Explains therapy and confirms patient understanding.				
IMPLEMENTATION AND ASSESSMENT					
6.	Pre-assesses patient to establish baseline values. (pulse, respirations, auscultation, gen. appearance)				
7.	Position patient properly.				
8.	Assist patient in initiating therapy.				
9.	Performs therapy at ordered volume and frequency.				
10.	Encourages and re-instructs patient, as necessary.				
11.	Checks vital signs, observes patient's response to therapy.				
12.	Modifies techniques to deal with adverse patient response.				
13.	Encourages patient to cough.				
14.	(Collects) Examines sputum.				
15.	Return patient to comfortable position.				
16.	Conducts post-assessment, compares to initial measures.				
FOLLOW UP					
17.	Stores equipment properly.				
18.	Washes hands.				
19.	Perform necessary charting.				

STUDENT'S COMPREHENSION OF PROCEDURE (SELECT ONE ONLY)	
THE STUDENT DEMONSTRATES COMPREHENSIVE KNOWLEDGE OF BASIC AND ADVANCED CONCEPTS BEYOND REQUIREMENTS OF PROCEDURE	
THE STUDENT DEMONSTRATES ABOVE AVERAGE UNDERSTANDING OF BASIC CONCEPTS APPLICABLE TO THE SKILL DEMONSTRATED	
THE STUDENT DEMONSTRATES AN AVERAGE KNOWLEDGE OF THE ESSENTIAL ELEMENTS OF THE TASK PERFORMED	
THE STUDENT SHOWS LIMITED UNDERSTANDING OF ESSENTIAL CONCEPTS RELATED TO THE PROCEDURE	
THE STUDENT HAS INADEQUATE KNOWLEDGE OF EVEN THE BASIC CONCEPTS RELATED TO THE TASK AT HAND	

STUDENT'S BEHAVIORAL TRAITS (SELECT AS MANY AS PERTINENT)	
IN PERFORMING THIS PROCEDURE, THE STUDENT WAS AWKWARD IN MOVEMENTS AND LACKED COORDINATION IN MANIPULATIVE ACTIVITIES	
IN PERFORMING THIS PROCEDURE, THE STUDENT WAS SLOW AND DELIBERATE IN CARRYING OUT THE DESIGNATED STEPS	
IN PERFORMING THIS PROCEDURE, THE STUDENT EXHIBITED AVERAGE DEXTERITY PRECISION, AND COORDINATION IN MOVEMENTS	
IN PERFORMING THIS PROCEDURE, THE STUDENT PROCEEDED RAPIDLY AND SKILLFULLY	

ADDITIONAL COMMENTS

Emphasize communicative skills (verbal and non-verbal) and effectiveness of patient interaction:

PHASE	SUMMARY PERFORMANCE EVALUATION AND RECOMMENDATIONS		
	SATISFACTORY	UNSATISFACTORY	SPECIFY DEFICIENCIES:
PRECLINICAL COLLEGE LABORATORY	☐ CAN NOW PERFORM SKILL UNDER DIRECT CLINICAL SUPERVISION	☐ REQUIRES ADDITIONAL COLLEGE LABORATORY	
CLINICAL	☐ READY FOR MINIMALLY SUPERVISED APPLICATION AND REFINEMENT	☐ REQUIRES MORE PRACTICE AND/OR ☐ REQUIRES MORE STUDY	

STUDENT: SUPERVISOR: FACULTY:

SHENANDOAH COLLEGE AND CONSERVATORY

Programs in Respiratory Care

Clinical Experience Evaluation

Each of the clinical rotations you have completed this semester (or are in the process of completing) is evaluated on this form by writing in the symbol for that rotation on a scale for each of the 9 dimensions as shown below:

ORGANIZATION

1	2	3	(WMH) 4	(WMC) 5

PROGRAM FACULTY

1	2	3	(WMC) 4	(WMH) 5

CLINICAL SUPERVISORS

1	2	3	(WMC) 4	(WMH) 5

The placement of the WMH on 2 of the 9 scales shows that you perceived your WMH rotation as well organized with a very high quality of teaching faculty. The placement of the WMC shows that you perceived your experiences at WMC as exceptionally well organized, supported by a faculty who were more than adequate in their teaching and clinical skills.

Using the symbols for the five clinical rotations provided, evaluate your perceptions of the relative value of each rotation in relation to the 9 dimensions. First, locate the most effective and least effective rotation on the scale, and then place the remaining rotations at the scale points in between.

Winchester Medical Center	WMC
Warren Memorial Hospital	WMH
Veterans Administration Medical Center	VA
City Hospital	CTY
Fairfax Hospital	FX

ORGANIZATION

Outcomes vague. Activities limited in scope, disorganized, uncoordinated and often poorly executed. Considerable loss of valuable learning time. Obviously hit-or-miss program management.

Outcome basically clear. Program largely coherent and reasonably well coordinated. Some loss of learning time, but overall management resulted in an efficient program.

Expected outcomes clear, pattern of activities broad, varied, and well executed: time used to maximum effect. Activities and presentations showed evidence of careful planning and coordination.

1 2 3 4 5

CLINICAL INSTRUCTORS

Teaching and technical competence of clinical instructors as a group uneven and in some cases questionable. Low degree of collaboration between students and clinical instructors in the teaching process.

Training and professional skills at a level where they provided support to the program. Experiences with the clinical instructors as a group generally positive, collaborative, and aided skill development. Clinical instructors made a positive contribution to the teaching program

Obviously well trained, concerned with professional development, and excellence of patient care. Both clinical competence and teaching skills of very high calibre. Clinical instructors contributed substantially to the quality of the teaching program.

1 2 3 4 5

PROFESSIONAL ROLE

Experiences in the rotation encompassed a very narrow range of professional roles of a respiratory care practitioner, e.g., experience with patient care plans, professional communication, discussion of professional role and responsibility, ethical issues, etc. were absent or very limited.

Rotation resulted in a reasonable grasp of the total scope of the professional activities of a respiratory care practitioner, but some were not observed or were limited in depth.

Rotation in total provided an exemplary model of the many professional roles of a respiratory care practitioner, including inpatient and outpatient care, physician and other health professional interaction, etc.

1 2 3 4 5

SKILLS AND KNOWLEDGE

Skills or knowledge development, in the discipline, for various reasons, was limited or uneven, good or excellent in some areas, superficial or absent in others. Resultant limitations on learning suggest that additional opportunities will be needed to grasp the basics of the discipline.

Obtained a reasonable grasp of the content of the discipline and of its unique approaches and problems. Knowledge and skill development were adequate as a basis for further professional development.

Personal development of skills and knowledge in the discipline was comprehensive, integrated, and of considerable depth. Experiences formed a solid base for the next stage of professional development. Obtained a good grasp of the knowledge of the discipline and of its unique approaches and problems.

1 2 3 4 5

TEAMWORK

1	2	3	4	5
Basic problems existed in group dynamics underlying patient care in the unit, such that experience with teamwork was limited or detracted from learning.		Experience helped to develop knowledge and skills involved in teamwork in the provision of health care to patients.		Experience contributed extensively to knowledge and skills of how different health professionals coordinate their efforts to provide patients with high quality care. Experiences emphasized teamwork, understanding, and respect for the roles of other health care professionals.

PATIENTS

1	2	3	4	5
Patient experiences failed to represent much of the range of clinical problems that make up the day-to-day practice of the respiratory care practitioner practicing in the field. Over-represented some problems while under-representing others of importance to learning in the discipline.		Patient experiences represented much of the range of clinical problems that make up the day-to-day practice of the respiratory care practitioner practicing in the field, but experience with some problems were either overemphasized, limiting, or absent.		Patient experiences represented the full range of clinical problems that make up the day-to-day practice of the respiratory care practitioner practicing in the field. Few problems were over-represented or lacking in the patient population.

EVALUATION/FEEDBACK

1	2	3	4	5
Evaluations were generally hit or miss, superficial, and sometimes unconstructive. Were generally inadequate as a basis for guiding professional development.		Evaluation procedures used were generally unbiased, helpful, constructive, and provided good feedback. Procedures were technically adequate, but tended to rely on only a few relatively simple techniques.		Evaluation procedures used were more varied, unbiased, reliable, and highly informative, and directed at constructively facilitating professional development: of sufficient depth and frequency to maintain direction of participation in the program.

ATTITUDES

1	2	3	4	5
Experiences in the rotation tended to reduce or negate prior positive attitudes and interests in the discipline, though not because of its intrisic value as an area of professional development.		Experiences in the rotation were sufficient to maintain positive attitudes and interests in the discipline.		Experiences in the rotation had a very positive influence on attitudes towards the discipline and the intrisic and enduring values it offers to the practitioner.

SUPERVISION

1	2	3	4	5
Faculty were unpredictable in their accessibility and appeared to give higher priorities to activities other than teaching. Supervisors either uncooperative or competitive in situations that might have been used for teaching.		Faculty were generally responsive and helpful, but some, though not serious, limits were placed on their accessibility to students. Supervision and guidelines in clinical teaching adequate.		Faculty were highly accessible, on time for meetings, and strongly motivated to accomodate students' learning needs. Provided excellent supervision and guidance for learning.

Unstructured Responses

This section provides space for further elaboration on your ratings, what you considered to be weak points and strong points of your clinical experiences, and how they might be improved.

Constructive Criticism	Appropriate Suggestion
1.	1.
2.	2.
3.	3.
4.	4.

This final section is reserved for your comments on the overall coordination and quality of your total clinical experience.

UNIVERSITY OF HARTFORD CLINICAL EVALUATION RT _____

STUDENT DATE EVALUATION: MID _____
FINAL _____

The following statements are scored using the guidelines as stated in the "Description of Performance."

NOTE: The areas of Technical Knowledge and Technical Proficiency must be passed with a minimum score of ACCEPTABLE (1) for each of these two categories. Failure to do so will result in an automatic grade of "F" for this clinical practice.

KEY: OUTSTANDING = 3; VERY GOOD = 2; Acceptable = 1; MARGINAL = 0.5; FAILING = 0

SECTION I

1. TECHNICAL KNOWLEDGE: 15 x Average = _____ (Grade Points) SCORE

A. Asses written order _____
B. Identifies reason for and effectiveness of procedure _____
C. Interfaces classroom to clinical _____
D. Gathers pertinent data from chart and discusses medical terms _____
Average: _____

2. TECHNICAL PROFICIENCY: 15 x Average = _____ (Grade Points)

A. Performs procedure and adapts techniques to clinical situation _____
B. Performs procedures with confidence _____
C. Completes clinical activity sheets _____
D. Demonstrates organization of activities _____
E. Identifies and discusses emergency situations _____
Average: _____

3. PATIENT INTERACTION: 10 x Average = _____ (Grade Points)

A. Explains therapy, reassures patient _____
B. Projects self confidence/gains patient cooperation _____
C. Considerate of patients needs _____
D. Follows principles of patient management _____
Average: _____

4. COMMUNICATION: 15 x Average = _____ (Grade Points)

A. Elicits and identifies appropriate information _____
B. Communicates relevant information to instructor and hospital staff _____
C. Translates procedures to patients _____
D. Discrete with patient information _____
Average: _____

5. CHARTING: 10 x Average = _____ (Grade Points)

A. Records pertinent data _____
B. Displays legibility and neatness _____
C. Completes requested clerical data _____
Average: _____

6. INITIATIVE: 15 x Average = _____ (Grade Points)

A. Willing to help others _____
B. Does additional research _____
C. Aware of patients condition and changes _____
Average: _____

7. PROFESSIONAL APPEARANCE: 10 x Average = (Grade Points) SCORE

A.	Well groomed and in proper attire	
B.	Follows instructor and is punctual	
C.	Accepts constructive criticism	
D.	Tactful with students, instructor and hospital staff	
E.	Tardy/Absent	

Average: _____

8. Judgement: 10 x Average = _____ (Grade Points)

A.	Arrives at correct therapeutic decisions	
B.	Takes appropriate corrective action	
C.	Seeks assistance when needed	

Average: _____

COMMENTS

SUGGESTIONS FOR IMPROVEMENT

STUDENT: _____

INSTRUCTOR: _____

TOTAL GRADE POINTS = _____

CLINICAL COORDINATOR: _____

CLINICAL GRADE = _____

PROGRAM DIRECTOR: _____

DATE: _____

Essentials and Guidelines of an Accredited Educational Program for the Respiratory Therapy Technician and Respiratory Therapist

Adopted 1962; revised 1972, 1977, 1986
Adopted by the
AMERICAN ASSOCIATION FOR RESPIRATORY CARE
AMERICAN COLLEGE OF CHEST PHYSICIANS
AMERICAN MEDICAL ASSOCIATION
AMERICAN SOCIETY OF ANESTHESIOLOGISTS
AMERICAN THORACIC SOCIETY

Program Review Committee
JOINT REVIEW COMMITTEE FOR RESPIRATORY THERAPY EDUCATION

Essentials are the minimum standards for accrediting educational programs that prepare individuals to enter an allied health profession recognized by the American Medical Association. The extent to which a program complies with these standards determines its accreditation status; the *Essentials* therefore include all requirements for which an accredited program is held accountable. *Essentials* are printed in regular typeface in outline form.

Guidelines assist programs in complying with the *Essentials*. *Guidelines* are printed in italic typeface in narrative form.

PREAMBLE

OBJECTIVE

The American Association for Respiratory Care, American College of Chest Physicians, American Medical Association, American Society of Anesthesiologists, and American Thoracic Society cooperate to establish, maintain, and promote appropriate standards of quality for educational programs in respiratory therapy and to provide recognition for educational programs which meet or exceed the minimum standards outlined in these *Essentials*.

These standards are to be used for the development and self-evaluation of respiratory therapy programs. Site visit teams assist in the evaluation of a program's compliance with the *Essentials*. Lists of accredited programs are published for the information of students, employers, and the public.

DESCRIPTION OF THE PROFESSION

The respiratory therapy technician administers general respiratory care. The knowledge and skills of the technician are acquired through formal programs of didactic, laboratory, and clinical preparation. Technicians may assume clinical responsibility for specified respiratory care modalities involving the application of well defined therapeutic techniques under the supervision of a respiratory therapist and/or physician. In fulfillment of this role the respiratory therapy technician may:

A. Review clinical data, history, and respiratory therapy orders.
B. Collect clinical data by interview and examination of the patient. This will include portions of the data by inspection, palpation, percussion, and auscultation of the patient.
C. Recommend and/or perform and review additional bedside procedures, and laboratory tests.
D. Evaluate data to determine the appropriateness of the prescribed respiratory care.
E. Assemble and maintain equipment used in respiratory care. Examples are:
   1. Oxygen delivery, gas metering, and analyzing devices.
   2. Aerosol generators, humidifiers, and environmental devices.
   3. Ventilators and patient breathing circuits.
   4. Artificial airways and resuscitation devices.
   5. Intermittent positive pressure and incentive breathing devices.
   6. Suctioning systems and air compressors.
   7. Measuring and monitoring devices used at the bedside.
   8. Chest physical therapy equipment.
   9. Quality control procedures for blood gas analysis.

   This role shall further include the recognition of malfunction of the above listed equipment and the initiation of appropriate corrective actions.
F. Assure cleanliness and sterility by the selection and/or performance of appropriate disinfecting techniques and monitoring their effectiveness.
G. Initiate, conduct, and modify prescribed therapeutic procedures to achieve one or more of the following specific objectives:
   1. Provide and maintain patient airway including bronchodilation, reduction of mucosal edema, and removal of bronchopulmonary secretions.

2. Provide and maintain adequate ventilation and tissue oxygenation.
3. Initiate procedures: the technician explains therapy and goals to the patient and provides protection for the patient by infection control.
4. Initiate emergency cardiopulmonary procedures.
5. Document therapeutic procedures and maintain records.

The respiratory therapist applies scientific knowledge and theory to practical clinical problems of respiratory care. Knowledge and skills for performing these functions are achieved through formal programs of didactic, laboratory, and clinical preparation. The respiratory therapist is qualified to assume primary responsibility for all respiratory care modalities, including the supervision of respiratory therapy technician functions. Under the supervision of a physician the respiratory therapist may be required to exercise considerable independent, clinical judgment in the respiratory care of patients.

In fulfillment of this role the respiratory therapist may:

A. Review, collect, and recommend obtaining additional data. The therapist evaluates all data to determine the appropriateness of the prescribed respiratory care, and participates in the development of the respiratory care plan.
B. Select, assemble, and check all equipment used in providing respiratory care.
C. Initiate and conduct therapeutic procedures to achieve one or more specific objectives.
D. Maintain patient records and communicate relevant information to other members of the health care team.
E. Assist the physician in performing special procedures in a clinical laboratory, procedure room, or operating room.

REQUIREMENTS FOR ACCREDITATION

I. SPONSORSHIP

A. **Site of the Educational Program**

Educational programs in respiratory care shall be established in public or private postsecondary institution(s) as defined and accredited by agencies recognized by the U.S. Department of Education and/or the Council on Postsecondary Accreditation or in an institutional consortium. A consortium shall consist of two or more institutions, one of which shall be an accredited postsecondary educational institution as defined above.

A consortium is an entity of two or more institutions having a written agreement for the purpose of sponsoring an educational program in respiratory care.

B. **Institutional Relationship**

All programs in which education is provided by two or more institutions shall have the responsibilities of each party clearly delineated in written agreements. Students shall be matriculated in the postsecondary educational institution and receive academic credit of the same type as other students in similar programs in the institution for courses throughout the curriculum. Upon successful completion of the program, the students shall be awarded a diploma, certificate of completion, or degree.

The participating institutions should agree upon their individual functions and duties in, and contributions to, the educational program. Such agreement should be in writing as a Letter of Understanding or a formal contract between the parties. All students should be regularly enrolled in the educational institution and receive credit throughout the curriculum.

II. OUTCOME ORIENTATION

A. **Program Goals and Standards**

There shall be a written statement of program goals and program standards consistent with and responsive to the demonstrated needs and expectations of the various communities it serves.

A statement of goals and standards should provide the basis for program planning, implementation, and evaluation. They should be rationally derived and compatible with both the mission of the sponsoring institution(s) and the expectations of the professional community of interest. Goals and standards should be based upon the substantiated needs of the health care providers and employers, and upon the characteristics of the students and the community served.

A program should regularly assess its goals and standards for appropriateness and demonstrate an ability to identify and espond to changes in the needs and/or expectations of its communities of interest. An advisory committee, or similarly constituted group representing these communities of interest, should be designated and charged with assisting program and sponsoring institutional personnel in formulating appropriate goals and standards, monitoring needs and expectations, and ensuring program responsiveness to change.

B. **Minimum Expectations**

The goals and standards must include, but need not be limited to, providing assurance that graduates demonstrate at least entry-level competencies, as periodically defined by nationally accepted standards of practitioner roles and functions.

Each program should incorporate within its goals and standards the expectation that the graduates shall consistently demonstrate competence at or above that required at entry-level into the field. These statements should include specific competencies representing the knowledge, skill, and behavior expected of program graduates. These competencies should provide the framework for structuring the program's instructional plan and for defining the objectives of its curriculum.

Competencies should be derived from and encompass nationally accepted standards of practitioner roles and functions, as periodically developed by the appropriate professional organizations. Program personnel are responsible for continually monitoring such standards and ensuring that the knowledge, skill, and behavior expected of the graduates are consistent with them.

Nothing in this Essential restricts programs from formulating and addressing goals and standards beyond entry-level competence. Programs are encouraged to consider preparing advanced-level or specialized practitioners, and to address other pertinent needs identified by the communities of interest. Programs adopting educational goals and standards beyond entry-level competence should clearly delineate this intent and further provide evidence of the students' prior or concurrent achievement of the basic competencies expected upon entry into the field.

III. RESOURCES

A. **Personnel**

1. Key Personnel

The sponsor shall appoint a full-time Program Director, a full-time Director of Clinical Education, and a Medical Director.

Key personnel should hold appropriate appointment at the educational institution(s). Full-time is defined as the usual and customary time commitment required by the institution from faculty members or employees in the same or similar positions in other health educational activities. Under this definition, the Program Director and the Director of Clinical Education should not hold more than one full-time position.

The Medical Director need not be full-time.

2. Number

The sponsoring institution(s) shall provide the number of faculty and support staff necessary to fulfill the needs of the program and to achieve its stated goals and standards.

It is the sponsor's responsibility to appoint both didactic and clinical faculty in sufficient numbers to provide classroom, laboratory, and clinical instruction and supervision. In addition, the sponsor should assure the availability of adequate and timely secretarial and other staff support.

3. Qualifications

Personnel shall be qualified by education and experience to fulfill their assigned responsibilities. The academic and professional respiratory care credentials of the key personnel shall be no less than the level for which the students are prepared.

The Program Director and Director of Clinical Education should have experience both in the clinical practice of respiratory care and in educational methodologies. The credentials of key personnel should be at least at the same level as or higher than the credentials for which the students are prepared in the program.

The key personnel should be Registered Respiratory Therapists with at least four (4) years experience in respiratory care, of which at least two (2) years should have been spent in a teaching position in an accredited respiratory care program.

The Medical Director should be a fully licensed physician, who has recognized qualifications by training and experience in the management of respiratory disease and in respiratory care practices.

B. **Physical Resources**

1. Administrative and Instructional Resources

Adequate and appropriate classrooms, laboratories, administrative, and ancillary student facilities, instructional materials, equipment, and supplies shall be provided as required to fulfill both the needs and goals and standards of the program.

"Adequate and appropriate" in this context implies that the classroom should be able to accommodate an entire class of students in a well lit and ventilated space, furnished and equipped according to the usual standards of an accredited educational institution.

The laboratory should also be of such size and design to permit all students assigned at any given time period to observe and perform all laboratory exercises prescribed in the program's instructional plan. The laboratory should be equipped with appropriate numbers and variety of equipment so that students can observe and perform all required laboratory exercises. The laboratory should be made accessible to students at times other than regularly scheduled exercises.

2. Library Resources

Collections of current books, periodicals, and pertinent reference materials shall be readily accessible to students and shall be sufficient in scope to support the curriculum.

Since the quality and availability of library resources affects program outcomes, they should be accessible to students outside of regular classroom hours, such as evenings and on weekends. Instructional plans should promote student utilization of these resources.

C. **Clinical Resources**

The clinical resources shall provide each student with learning opportunities sufficient in quantity, quality, and scope commensurate with national standards, to ensure achievement of the competencies stated in the curriculum.

The clinical facilities of the program should provide services commensurate with the types and level of practice throughout the nation and in sufficient volume and variety for the number of respiratory care students receiving clinical education in that facility. The sponsor should periodically evaluate each clinical facility with respect to its continued appropriateness and efficacy in meeting the expectations of the program. Clinical affiliates should conform to the standards for respiratory care established by the Joint Commission on the Accreditation of Hospitals.

D. **Financial**

The financial resources shall ensure the achievement of each program goal and standard.

The sponsor should provide reasonable assurance that financial resources will meet the program's commitment to the students.

IV. STUDENTS

A. **Disclosure**

Accurate information regarding program requirements, tuition and fees, institutional and programmatic policies and procedures, and supportive services shall be available to all prospective students and provided to all enrolled students.

Every program should make available current documents (catalog, brochure, handbook, etc.) which clearly describe the course of instruction and the requirements for graduation. These materials should also describe all costs to be borne by the student and all services to which these costs entitle them. Student travel and transportation requirements should be clearly stated. Prospective class schedules and clinical rotations should be described.

B. **Admission**

Admission of students shall be made in accordance with clearly defined and published practices of the institution and program, and shall be non-discriminatory with respect to race, color, creed, sex, age, handicap(s), or national origin. Specific academic, health related, and/or technical requirements for admission shall also be clearly defined and published.

Programs are encouraged to develop objective, success-related admission standards and/or prerequisites. These standards and/or prerequisites should be made known to all potential program applicants.

C. **Services**

All students enrolled in the program shall have access to the full range of services provided by the sponsoring institution(s).

All students in respiratory care programs should be regularly matriculated in the educational institution which sponsors or participates in the program. Therefore, students should be eligible to receive all services offered by the educational institution.

D. **Number**

The number of students enrolled shall be commensurate with both the goals and standards of the program and the methods and requirements of its instructional plan. The number of students enrolled shall not exceed the resources of the program.

The number of students enrolled in each class should be commensurate with effective learning and teaching practices, and should be consistent with an appropriate student/instructor ratio for respiratory care education.

E. **Clinical Experience**

All clinical experiences shall be educational in nature. The sponsor shall assure that each clinical assignment of the students is based upon the instructional plan of the program.

All clinical activity assigned to students should be sequential, integrated with didactic and laboratory instruction, and consistent with the overall instructional plan of the program.

V. INSTRUCTIONAL PLAN

A. **Curriculum**

Instruction shall be based on a structured curriculum which clearly delineates the competencies to be developed and the methods whereby they are achieved.

Practitioner competencies should provide the basis for deriving the objectives and activities constituting the program's curriculum. Both the competencies stated and the curriculum

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objectives derived should be consistent with the level of practitioner preparation delineated in the program's goal and standard statements, and encompass at least the knowledge, skill, and behavior expected of graduates at entry into the field.

These competencies should be achieved within the framework of appropriately sequenced basic science, clinical science, and respiratory care units, modules, and/or courses of instruction, accompanied or followed by a series of structured laboratory and clinical experiences.

The following units, modules, and/or courses of instruction should be included:

1. *Basic Sciences*
   - *Biology*
   - *Cardiopulmonary anatomy and physiology*
   - *Chemistry*
   - *Computer science*
   - *Human anatomy and physiology*
   - *Mathematics*
   - *Microbiology*
   - *Pharmacology*
   - *Physics*
   - *Psychology*
2. *Clinical Sciences*
   - *Cardiopulmonary diseases*
   - *General medical and surgical specialties*
   - *Pathology*
   - *Pediatrics and perinatology*
3. *Respiratory Care Content Areas*
   - *Aerosol therapy*
   - *Airway management*
   - *Assessment of patients' cardiopulmonary status*
   - *Cardiopulmonary diagnostics and interpretation*
   - *Cardiopulmonary monitoring and interpretation*
   - *Cardiopulmonary rehabilitation and home care*
   - *Cardiopulmonary resuscitation*
   - *Chest physiotherapy*
   - *Ethics of respiratory care and medical care*
   - *Gas therapy*
   - *General patient care*
   - *Humidity therapy*
   - *Hyperinflation therapy*
   - *Mechanical ventilation management*
   - *Oxygen therapy*
   - *Pediatrics and perinatology*

The scope and depth of instruction provided in these areas and the corresponding level of performance expected of students should be consistent with the goals and standards of the program. Whatever level of practitioner preparation is stated, program personnel are expected to ensure that the objectives, content, and activities stated in the curriculum represent current concepts and advances in the practice of respiratory care.

In accordance with the mission, goals, and standards of the sponsoring institution(s) and program, other courses of study may be necessary or desirable. Programs are encouraged to incorporate general education, liberal arts and humanities studies within their curricula, and to provide opportunities for subsequent academic and career growth.

B. **Length and Credit**

The length of the curriculum, credits earned, and academic recognition awarded shall be consistent with the identified goals and standards of the program and its sponsoring institution(s).

The length of time the students spend in the program may vary according to the program's goals and standards, the instructional plan, and the students' background. However, the program should be long enough to allow for an appropriate sequence of basic science, clinical science, and respiratory care content accompanied or followed by a series of structured laboratory and clinical experiences.

C. **Implementation**

1. Instructional Methods

   Instructional methods shall be consistent with the goals and standards of the program, the educational needs of its students, and the competencies and objectives stated in its curriculum.

The choice of instructional strategies should be appropriate to the instructional plan and to the learning needs of the students.

2. Multiple Program Designs

   When more than one design is used to develop the same practitioner competencies, the program shall provide evidence that all such variations result in equivalent graduate outcomes.

The programs should demonstrate that the instructional methodologies are equivalent, that the teaching mechanisms are valid, and that the products of all such program designs are equally competent.

All educational programs should offer alternate instructional methodologies to meet special student needs.

3. Integration

   The program shall ensure that instruction in the clinical setting is properly integrated and coordinated with the other components of the curriculum, and that each student receives adequate technical instruction and experience consistent with the goals and standards of the program.

The program should assure that the clinical experience and instruction of students is meaningful and parallel in content and concept with the material presented in didactic and laboratory sessions. Schedules should be developed which provide for equivalent clinical experience for all students. The instructional and supervisory activities of all clinical instructors should be appropriate, effective, and coordinated.

4. Physician Input

   Physician input shall be provided both in the administration of the program and instruction of the students to ensure achievement of the program's stated goals and standards.

The purpose of the physician input is two-fold. The administrative input should assure the appropriate scope and accuracy of the medical content of the program. The purpose of the instructional input into all phases of the program is both to convey information and perspective, and also to develop effective communication skills between physicians and students.

D. **Student Evaluation**

1. Frequency and Purpose

   Evaluation of students shall be conducted on a recurrent basis and with sufficient frequency to provide both the students and program faculty with valid and timely indications of the students' progress toward and achievement of the competencies and objectives stated in the curriculum.

The evaluation system should provide the student and faculty with clear and timely indications of each student's knowledge, performance-based strengths and weaknesses, and progress toward attainment of the competencies and objectives stated in the curriculum. The evaluation system should also verify student achievement of these competencies and objectives.

Students should have ample time to correct identified deficiencies in knowledge and/or performance.

2. Methods

   The methods used to evaluate students shall verify the achievement of the objectives stated in the curriculum. Evaluation methods, including direct assessment of clinical competencies in patient care environments, shall be appropriate in design to assure valid assessment of competency.

Faculty should demonstrate that the evaluation methods chosen are consistent with the competencies and objectives being tested. Methods of assessment should be carefully

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designed and constructed to measure stated objectives at the appropriate level of difficulty. Methods used to evaluate clinical skills and behaviors should be consistent with stated performance expectations and designed to assess competency attainment.

In order to ensure effectiveness, student evaluation methods should undergo frequent appraisal. Faculty should demonstrate that such appraisals result in the updating and revision of the methods employed, or in the formulation of more effective methods.

3. Documentation

Records of student evaluations shall be maintained in sufficient detail to document learning progress and achievements.

The records of each student should include sufficient information to document satisfactory completion of all didactic and clinical requirements. In addition, the records maintained by the institution should be complete whether or not a student is successful in completing the prescribed course of instruction.

VI. Program Evaluation

The program shall periodically assess its effectiveness in achieving its stated goals and standards. The results of this evaluation must be reflected in the review and timely revision of the program.

Program evaluation methods should emphasize gathering and analyzing data on the effectiveness of the program in developing competencies consistent with the stated program goals and standards. This may be accomplished through a variety of methods such as: surveys of current and former students, follow-up studies of graduate employment and credentialing examination performance, and input from the various groups representing the program's communities of interest. Program personnel should gather information from as many sources as possible because a single source of data cannot be expected to provide conclusive findings.

Documented internal evaluation should take place annually. The cumulative results should be incorporated into the self-study, site visit, and other accreditation processes or reports.

The results of program evaluation should provide the basis for ongoing planning and appropriate change. Confirmed shortcomings should be expeditiously corrected.

MAINTAINING AND ADMINISTERING ACCREDITATION

A. Program Sponsoring Institution Responsibilities

1. Applying for Accreditation

The accreditation review process can be initiated only at the written request of the chief executive officer or an officially designated representative of the sponsoring institution.

A program or sponsoring institution may, at any time prior to the final accreditation action, withdraw its request for initial or continuing accreditation.

2. Maintaining Accreditation

Programs are required to comply with administrative requirements for maintaining accreditation, which include:

a. Submitting the Self-Study Report or a required progress report within a period of time determined by JRCRTE.

b. Agreeing to a site visit date before the end of the period for which accreditation was awarded or in accord with applicable CAHEA policies.

c. Informing JRCRTE within a reasonable period of time of changes or vacancies in key program personnel.

d. Paying JRCRTE accreditation fees within a period of time determined by JRCRTE.

e. Completing and returning by the established deadline, the annual reports provided by CAHEA and JRCRTE.

Failure to meet these administrative requirements for maintaining accreditation can lead to being placed on Administrative Probation and ultimately to having accreditation withdrawn.

B. **CAHEA/JRCRTE Responsibilities**

1. Administering the Accreditation Review Process

At the written request of the chief executive officer or an officially designated representative, CAHEA and JRCRTE review educational programs to assess compliance with the *Essentials*.

The accreditation review process includes a site visit. If the performance of a site visit team is unacceptable or inappropriate, the institution may request a second site visit.

Before JRCRTE forwards its recommendations to CAHEA, the program being reviewed is given an opportunity to review the report of the site visit team and to comment on its accuracy.

Prior to recommending Probationary Accreditation to CAHEA, JRCRTE provides the sponsoring institution with a second opportunity to respond to the cited deficiencies. JRCRTE reconsideration of a recommendation for Probationary Accreditation is made on the basis of conditions existing when JRCRTE arrived at its accreditation recommendation to CAHEA and on subsequent documented evidence of corrected deficiencies.

CAHEA assignments of Probationary Accreditation, including those following JRCRTE reconsideration, are final and are not eligible for further appeal.

2. Withholding or Withdrawing Accreditation

Prior to recommending Accreditation Withheld or Accreditation Withdrawn to CAHEA, JRCRTE provides the sponsoring institution with an opportunity to request reconsideration by JRCRTE. CAHEA decisions to withhold or withdraw accreditation are final unless appealed to CAHEA. A copy of CAHEA Appeals Procedures for Accreditation Withheld or Withdrawn is included in the letter notifying the program of one of these actions.

When accreditation is withdrawn, the appropriate official is provided with a clear statement of each deficiency and is informed that application for accreditation as a new applicant may be made whenever the program is believed to be in substantial compliance with the *Essentials*.

As indicated in Classification of Accreditation Actions, all students successfully completing a program granted any accreditation category at any point during their tenure as students are regarded as graduates of a CAHEA-accredited program.

3. Inactive Programs

Programs that do not enroll students for up to two years may be designated as inactive. Such programs must continue to pay annual fees to JRCRTE. After being inactive for two years, the program can be considered as discontinued and accreditation may be withdrawn.

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CREDENTIALING ISSUES

Tracking Respiratory Care Graduates

By Jeff J. Ward, M.Ed., RRT

Credentialing Issues is a column featuring discussion of key topics relevant to health care certification. The opinions expressed are those of the author and may not reflect official policies or views of the Board of Trustees.

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In the past, only some respiratory care educational programs carefully followed their students after graduation. Most program directors kept a mixed group of records since formal survey data were not required by accreditation standards. Keeping track of graduates was a lot of work, especially for programs that have national as well as local placement. Recent graduates tend to move frequently in the first few years of practice and only a few alumni seem to write back to inform the school of career or address changes.

Graduates' initial employment was usually known because many individuals initially seek employment in close proximity to the program from which they graduate and since program size and resources are frequently based on demand reported by local employers. Programs have also been interested in their graduates' pass rates on NBRC examinations. The NBRC began directly reporting exam results to schools in 1976, which was the beginning of an organized feedback system to assess professional preparation. However, these measures are static samples. After passing the exams, many alumni fade into the sunset. This article will review the tracking process and point to attitudes, as well as techniques, that may be helpful.

Since the early 1980's, interest in learning outcomes has risen sharply because of a number of factors. Administrators had growing concern about increasingly limited resources, legislators and those responsible for providing education became interested in seeing evidence of return on investments, and, funding became more dependent upon the degree to which educational objectives were attained. In addition, the political climate was ready for this outcome-oriented approach. Concurrently, there was national concern for the quality of high school and post-secondary education. Falling SAT scores, increasing drop out rates and declining general education suggested an erosion of quality. In response, increasing numbers of schools are requiring demonstrated performance as criteria for course completion, grade promotion or graduation. This shift in emphasis is occurring today in all levels of education from elementary to graduate school. Allied health education has paralleled this theme as school accreditation standards now place greater emphasis on the outcome of training. The Committee on Allied Health Education and Accreditation (CAHEA) has been a proponent of the outcomes approach and in 1986, the Joint Review Committee for Respiratory Therapy Education (JRCRTE) adopted a new set of "Essentials" based on this theme.

The current JRCRTE accreditation requirements mandate that each program carefully describe its goals, assessment standards and evaluation techniques. Although some outcomes can be measured while students are "on campus," others need to be measured following graduation. Program directors are now faced with a new challenge; alumni and/or their employers may need to be repeatedly surveyed. Currently, our program surveys graduates at 3 months, 1 1/2 years and 5 years. Survey data with board exam analysis fits into an overall plan for assessing program goals.

Graduate Surveys

Success in tracking graduates requires two main components, a correct address and an alumnus willing to return the completed survey. Both items seem to go together, since a conscientious alumnus will also keep their program furnished with updated addresses. To return a thoughtfully completed survey, alumni must have some positive feeling for their school. Although a seemingly simple task, it is easier to throw a survey in the trash than to complete it. Graduates must somehow feel that the survey data will be used to benefit the program.

Positive attitudes can start to be developed with the first impressions of the program. Graduates who believe they were treated fairly, well prepared, and respected as

***(Tracking Respiratory Care Graduates,** continued on Page 3)*

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(Tracking Respiratory Care Graduates, *continued from Page 1)*

educational clients tend to look back at the program favorably. They may not have liked everything or everyone at the school, but they believe the program cared about them. Even if individuals on the faculty change, satisfied alumni have a desire to put something back into their school. This caring can be displayed by thoughtfully completing a survey.

In promoting positive attitudes, I believe the educational process competes with outcome for importance. Alumni may be miles away and may have graduated years ago. Techniques of intimidation and bargaining that may have been motivators during school are of no value now. There are a few activities that may help students understand the outcome evaluation approach and the value of alumni surveys.

Involvement on the program's advisory committee is an excellent way for students to observe the process of developing and using graduate surveys. In our program, students elect a student member and faculty allow class time for that individual to review student issues needing attention at the committee level. In addition, the representative reviews the content of advisory committee meetings with the class. The students have been able to see the importance of the survey in assessing outcomes and its value to the accreditation process. They observe how the data is handled regarding confidentiality and how it contributes to dealing with perceived program weaknesses. Current students also help send out our graduate survey; they fold, stuff and seal envelopes. Many hands make this task go quickly and the students see the forms to which they will be asked to respond in the future.

An alumni newsletter has been very helpful in maintaining and updating the addresses of our graduates. Our semi-annual publication prints a mixed collection of content. The most newsworthy items are letters from alumni updating classmates on new jobs, marital status, births or just skuttlebutt. Other material includes poems*, editorials, pen and ink doodles, and news about the school and affiliating hospitals. We also provide free advertising for graduates looking for work and departments recruiting staff. We find that more articles come from distant grads than those who are local.

The purpose of the newsletter is to provide a bridge between the school and the alumni. Graduates have shared a common experience and developed friendships. The newsletter assists in continuing those friendships, and provides both alumni and the program with a continuing update of the alumni database. The fall issue contains an annual address update in time for Christmas card mailings; alumni can list their work and/or home address. We also publish a "lost souls" column requesting help from the "grapevine" on the whereabouts of these individuals; an addressed postcard is enclosed with each issue to facilitate correspondence. There is also an element of pure fun in the publication which we have entitled Pneumopulmonastic Servospirotracer (P.S.). While there is news and creative prose, there are no requests for money. It appears that alumni enjoy getting the newsletter and notify the editor with address changes to maintain their "subscription." An official alumni association is contemplated for the future.

Tracking down lost alumni is aided by having the graduates' town in the *NBRC DIRECTORY* and our newsletter periodically urges alumni to maintain their NBRC active status. Also, keeping the parents' address or phone number is usually very helpful. Another trick is printing "Address Correction Requested" below the return address on mailing envelopes. Normally, the post office will only forward mail to a new address for three months, but by printing the aforementioned the post office may provide you the most recent forwarding address. The mail will be returned to the sender, but for a $.35 fee it will have the new address.

The college's alumni or development office is also a helpful resource for addresses. Leads that indicate a graduate lives in a certain city can be checked best by telephone. Telephone operators are an obvious source; calling hospital respiratory care departments is a time consuming last resort. City listings of hospital phone numbers can be found in the American Hospital Association's directory. By speaking to the department's director and explaining the purpose of the inquiry, the resistance on release of information can sometimes be eased. I have found the telephone to be the best stimulator to help alumni or employers return surveys.

Library

City libraries have a collection of out-of-town directories that can facilitate further search by contacting neighbors or potential relatives with the same last name. Last name changes of women who marry cause continuing difficulty. Graduates that "retire" from active practice are more difficult to locate, as are those that are listed by name only in the inactive sections of the *NBRC DIRECTORY*. Our newsletter periodically warns alumni of the dread NBRC "inactivitis."

NBRC Credential Verification Service

Recently, the NBRC has made a service available enabling programs to verify an individual graduate's credentials. The NBRC will identify status on all four credentials (CRTT, RRT, CPFT, RPFT). Until now, only surveys allowed programs to know if graduates had taken/passed pulmonary function exams. Normally, schools receive a list of those who earn a credential as a result of an exam, plus detailed (anonymous) scores for the Entry Level CRTT, Advanced Practitioner and Clinical Simulation Examinations. The verification search does not report scores, but exam dates and Registry number are provided for the $2 per alumnus fee.

Computers

A computer is an extremely helpful tool in tracking graduates. We use database software to hold home/hospital address and phone numbers, professional and academic credentials, and any specialty job functions. We can sort

(Tracking Respiratory Care Graduates, *continued on Page 4)*

(Tracking Respiratory Care Graduates, *continued from Page 3)*

by class year or other combinations Mailings are made much easier by printing address labels on continuous feed self-adhesive sheets, a self-addressed, stamped envelope is essential with any survey mailing The word processor maintains graduate surveys which have recently been "tuned up" to better match our needs and make them easier to complete A spread sheet can help in tabulating objective data and desktop publishing software helps compose our alumni newsletter

Although tracking graduates usually adds work, frustration and expense to programs, it is rewarding both personally and educationally It is great fun to watch families and careers grow, as well as hear how the school might improve for its future clients Post-graduate assessments also provide objective data for curriculum change and resource allocation Finally, knowing where graduates go and what they become is a chance for the entire faculty to experience the reward of their efforts

Ode to Gases and Vapors

It's just exams an R.T. passes
When knowing vapor from the gases:
Gas will make a measured volume,
Vapor really can't alone.
V of gas by T determined,
Vapor? P alone is known.
Heat the stuff past T of boiling,
Matters not what starting torr;
A gas is what you've got by now,
There is no vapor anymore.
Get T above what's critical,
The vapor and its liquid source
's not possible to generate
No matter what the squeezing force.

H.F. Helmholz, Jr., MD

Status Inactivus

The NBRC has issued a warning to all so-called members to be on the alert for the disease Status Inactivus.

Symptoms
- *Lack of recognition by NBRC*
- *Inadvertent placement on inactive therapist list*

Causes
- *Most often caused by movement of therapods from one location to another without proper notification to NBRC*
- *May also be caused by therapod brain lock about renewal*

Cure
- *No known cure at present time*
- *Proper preventative measures can be taken to avoid this dreaded disease*

Symptoms can be remedied by sending an apology to the NBRC by filling out renewal form and infusing the proper dosage of remuneration to the NBRC.

This disease has been known to sneak up on its victims without warning.

Don't be caught with your card down.

Check your status today!

Rich Waudby, '84

**(This material was reprinted from the Mayo School of Health-Related Sciences' Newsletter by permission)*

(Pass Rate, continued from Page 2)

One exception to this conclusion is when a person fails the examination, and is highly motivated to study those areas of low performance (as indicated on the score report) to improve his or her performance next time. The fact that some retake candidates do pass the examination on future administrations is evidence that such individual initiative has been effective. Without an effective intervention, such as a well planned program of study, a highly reliable test will ensure that an individual's score on future occasions will be within a few points of his or her first score. Thus, if a person fails the test the first time, he or she is likely to fail on future occasions.

BULLETIN BOARD

CRTT Examination

July 15, 1989 Examination - All candidates who submitted an application for the July 15 CRTT Examination have been sent status correspondence from the Executive Office Over 4,200 applications were received by the application deadline New candidates and reapplicants who requested a study guide should receive this publication by June 16 Admission tickets indicating the exact time and location of the examination will be sent to all scheduled candidates from the testing agency the week of June 26

Reminder: If you submitted an application with the "Expected Graduation Statement" signed by the program director of your respiratory therapy educational program, you must submit an official copy of your certificate of completion before your test results will be released Please ensure that your certificate of completion is received by the NBRC no later than July 31 so your test results will not be delayed

November 11, 1989 Examination - The Executive Office will begin accepting applications for the November 11 CRTT Examination on July 1 The application deadline is September 1, 1989

If you need an application form or have any questions regarding application procedures, please contact Ms. Melanie Thomas, Examination Associate

(Bulletin Board, *continued on Page 5)*